

### **Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **LISTING OF CLAIMS**

1. (Currently amended) A graphical user interface (GUI) for assisting a healthcare practitioner in diagnosing and treating patients by interacting with the healthcare practitioner during progression through a stored clinical best practice workflow comprised of a plurality of interlinked steps, the GUI comprising:

a page including a map for assisting the healthcare practitioner to navigate the stored clinical best practice workflow, the map comprising a plurality of patient care pathways, each patient care pathway conforming with best practice guidelines and comprising a plurality series of interlinked nodes, wherein each node in the series has a unique relationship with a respective step in the stored best practice workflow, ~~the plurality of interlinked nodes graphically represent a plurality of possible patient care pathways across the map, and each patient care pathway comprises two or more of the plurality of interlinked nodes;~~

data entry means for entering clinical data relating to a particular selected node the data entry means comprising display means for displaying, within a portion of the page, a predetermined data entry request and a response made by the healthcare practitioner to the request;

data recording means for storing the response, made by the healthcare practitioner to the request, in a data record;

pathway means arranged to use the response of the healthcare practitioner stored in the data record to graphically indicate a suggested a next-step node to traverse next within the stored best practice workflow, ~~thereby assisting the healthcare practitioner to determine a particular patient care pathway across the map; and~~

navigation means arranged to enable the healthcare practitioner to choose the node to traverse next independently of the node suggested by the pathway means, the navigation means

being further arranged to permit the healthcare practitioner to traverse a route across the map that misses out one or more nodes from the series of nodes representing a currently traversed patient care pathway; and

graphical means for graphically representing in the page ~~a patient care pathway~~ the route traversed across the map selected by the healthcare practitioner across the map.

2. (Currently amended) A GUI according to Claim 1, wherein the plurality of ~~interlinked nodes~~ patient care pathways represent a complete stored clinical best practice workflow on a single page.
3. (Previously presented) A GUI according to Claim 1 or 2, wherein each node represents an action, decision or result within the stored clinical best practice workflow.
4. (Currently amended) A GUI according to Claim 1, wherein the data entry means comprises presentation means for presenting data relevant to a location of the selected node ~~within the plurality of interlinked nodes~~ and selection means for enabling the healthcare practitioner to select at least some of that data.
5. (Original) A GUI according to Claim 4, wherein the presentation means comprises a plurality of drop-down lists of location-specific information.
6. (Original) A GUI according to Claim 1, wherein the data entry means is arranged to use the entered data at a first node to determine further information required at a second node, linked to the first node.
7. (Previously presented) A GUI according to Claim 1, further comprising updating means for updating any information related to the step in the stored clinical best practice workflow with entered data.

8. (Original) A GUI according to Claim 1, further comprising means for converting the entered data into a classification code representing that data.
9. (Previously presented) A GUI according to Claim 8, wherein the classification code comprises a standard classification code describing a complete range of possible data inputs relevant to the subject of the stored clinical best practice workflow.
10. (Previously presented) A GUI according to Claim 8, wherein the classification code represents one of the group comprising a diagnosis, a symptom, an action, a treatment and an operative procedure.
11. (Currently amended) A GUI according to Claim 1, further comprising analysing means for analysing the entered data and generating a list of actions associated therewith and listing means for listing the list of associated actions to the healthcare practitioner adjacent the plurality of displayed interlinked nodes.
12. (Previously presented) A GUI according to Claim 1, wherein at least some of the nodes include information means providing a graphical indication that concealed clinical information relating to the step in the stored best practice workflow associated with that node is available for presentation on the page, the information means being arranged to reveal the concealed clinical information on selective interaction with the node by the healthcare practitioner.
13. (Previously presented) A GUI according to Claim 12, wherein the graphical indication is a graphical icon.
14. (Previously presented) A GUI according to Claim 12, wherein the information means is arranged to provide a plurality of different levels of detail of information, in accordance with a selection made by the healthcare practitioner.

15. (Currently amended) A GUI according to Claim 1, further comprising action list means for generating a list of actions and presenting the same to the healthcare practitioner adjacent the ~~plurality of displayed~~ interlinked nodes, the action list means being arranged to determine the list from analysis of the healthcare practitioner's navigation through the ~~plurality of~~ interlinked nodes.

16. (Currently amended) A GUI according to Claim 15, wherein the action list means is arranged, at the end of traversal of a ~~plurality of interlinked nodes comprising the page~~ the map, to present the list to the healthcare practitioner with options for the healthcare practitioner to confirm each action, and to determine the list of actions to be implemented from the healthcare practitioner's confirmation.

17. (Previously presented) A GUI according to Claim 1, further comprising a note recordal means for recording textual notes generated by the healthcare practitioner relating to a particular node, the note recordal means being arranged to link the note with the particular node such that the stored note is retrievable when the healthcare practitioner has navigated to that particular node.

18. (Previously presented) A GUI according to Claim 17, wherein the note recordal means is arranged to record a variation of the stored clinical best practice workflow at a particular node as determined by the healthcare practitioner.

19. (Previously presented) A GUI according to Claim 17, further comprising feedback generation means for converting a note determined by the healthcare practitioner into a transmittable message and for transmitting the message to another healthcare practitioner having access to a version of the GUI.

20. (Currently amended) A GUI according to Claim 1, further comprising a new page linking means for linking a node at the end of a ~~branch of the plurality series~~ of interlinked nodes within one page to a node within another different page.

21. (Previously presented) A GUI according to Claim 20, wherein the new page linking means comprises a graphical icon and selection by the healthcare practitioner comprises interaction between an end-user navigational tool and the icon.

22. (Currently amended) A GUI according to Claim 1, wherein the GUI has access to an Electronic Patient Record Management System and the GUI further comprises an EPRMS management means for obtaining and presenting details of a selected electronic patient record in a portion of the page.

23. (Currently amended) A GUI according to Claim 22, wherein the EPRMS management means further comprises population means for populating one or more nodes with at least some of the details of a selected electronic patient record, thereby reducing any required data entry at that node.

24. (Previously presented) A GUI according to Claim 22, wherein the EPRMS management means is arranged to use the details of the selected electronic patient record to determine what information is required at a node from the healthcare practitioner.

25. (Previously presented) A GUI according to Claim 1, further comprising referral means for generating a referral message, the referral means being provided at a node and using information associated with the node to populate at least some of the referral message on selection by the healthcare practitioner.

26. (Previously presented) A GUI according to Claim 25, wherein the referral means comprises a graphical icon and selection by the healthcare practitioner comprises interaction between an end-user navigational tool and the icon.

27. (Original) A GUI according to Claim 25, wherein the referral means is arranged to use information obtained from an electronic patient record to populate automatically at least some of the referral message.

28. (Original) A GUI according to Claim 1, further comprising searching means for searching an externally accessible knowledge base, the searching means being arranged to convert a selected information topic into a predetermined classification code representing that topic and to transmit that classification code within an information request to the knowledge base for relevant information contained therein.

29. (Previously presented) A GUI according to Claim 28, wherein the classification code comprises a standard classification code describing a complete range of possible data inputs relevant to the subject of the stored best practice workflow.

30. (Previously presented) A GUI according to Claim 28, wherein the classification code represents one of the group comprising a diagnosis, a symptom, an action, a treatment and an operative procedure.

31. (Previously presented) A GUI according to Claim 28, wherein the searching means is arranged to receive a response to the information request and display the results of the search to the healthcare practitioner.

32. (Previously presented) A GUI according to Claim 28, wherein the searching means is arranged to receive a response to the information request and use the response to determine a relevant page of a plurality of pages for display to the healthcare practitioner.

33. (Previously presented) A GUI according to Claim 28, wherein the searching means is arranged to display a plurality of information topics to the healthcare practitioner and to enable selection of at least some of these information topics, each information topic being related to the current node location of the within the current page.

34. (Previously presented) A GUI according to Claim 33, wherein the searching means is arranged to enable the healthcare practitioner to enter additional information topics not displayed by the searching means.

35. (Currently amended) A GUI according to Claim 1, further comprising editing means for editing the ~~plurality of interconnected~~ nodes on a page, the editing means being arranged to update the stored workflow to reflect any change made to the page.

36. (Previously presented) A GUI according to Claim 35, wherein the editing means is arranged to enable the healthcare practitioner to add a new node and to specify the contents of the new node.

37. (Previously presented) A GUI according to Claim 35, wherein the editing means is arranged to enable the healthcare practitioner to specify functionality associated with a node.

38. (Previously presented) A GUI according to Claim 35, wherein the editing means is arranged to enable the healthcare practitioner to add or edit a classification code associated with the contents of a node.

39. (Currently amended) A GUI according to Claim 35, wherein the editing means is arranged to enable the healthcare practitioner to control the positioning of the new node within the page and interconnection of the new node to the existing ~~plurality of interconnected~~ nodes.

40. (Currently amended) A GUI according to Claim 1, further comprising recording means for recording the route traversed by the healthcare practitioner's navigation through the plurality of interlinked nodes across the map.

41. (Canceled)

42. (Currently amended) A GUI according to Claim 41- 40, further comprising navigation analysis means, wherein information relating to each step in the process is cost quantifiable and the navigation analysis means is arranged to determine a total cost of the pathway route traversed by the healthcare practitioner taken through the stored best practice workflow.

43. (Currently amended) A GUI according to Claim 41- 42, wherein the navigation analysis means is arranged to analyse the performance of the healthcare practitioner through the stored best practice workflow.

44. (Withdrawn) A graphical user interface (GUI) for interacting with a user during progression through a workflow process, the GUI comprising:

- a map comprising a plurality of interlinked nodes which graphically represent the structure of a plurality of interlinked steps of a stored workflow process;

- a data entry module for entering data relating to a particular selected node; wherein the node has a unique relationship with a step in the workflow process;

- a pathway module for determining a particular pathway through the workflow process using the entered data, the pathway comprising two or more of the plurality of interlinked nodes;
- and

- a display module for graphically representing the resultant pathway through the workflow process in the map.

45. (Previously presented) A GUI according to Claim 1, wherein the GUI provides a user interface to a knowledge base storing the clinical best practice workflow.

46. (Currently amended) A graphical user interface (GUI) for assisting a healthcare practitioner in diagnosing and treating patients by interacting with the healthcare practitioner during progression through a plurality of stored clinical best practice workflows, each workflow comprised of a plurality of interlinked steps, the GUI comprising:

- a plurality of pages representing a plurality of interrelated stored clinical best practice workflows, each page including a map for assisting the healthcare practitioner to navigate a



respective stored clinical best practice workflow, ~~the each~~ map comprising a plurality of patient care pathways, and each patient care pathway conforming with best practice guidelines and comprising a series of interlinked nodes, wherein each node in the series has a unique relationship with a respective step in the respective stored best practice workflow, ~~the plurality of interlinked nodes graphically represent a plurality of possible patient care pathways across the respective maps, and each patient care pathway comprises two or more of the plurality of interlinked nodes;~~

data entry means for entering clinical data relating to a particular selected node, the data entry means comprising display means for displaying, within a portion of the page, a predetermined data entry request and a response made by the healthcare practitioner to the request;

pathway means arranged to use the response of the healthcare practitioner stored in the data record to graphically indicate a suggested a next-step node to traverse next within the stored best practice workflow, ~~thereby assisting the healthcare practitioner to determine a particular patient care pathway across the corresponding map; and~~

navigation means arranged to enable the healthcare practitioner to choose the node to traverse next independently of the node suggested by the pathway means, the navigation means being further arranged to permit the healthcare practitioner to traverse a route across the maps that misses out one or more nodes from the series of nodes representing a currently traversed patient care pathway; and

graphical means for graphically representing in the page the route ~~traversed a patient care pathway across the corresponding map selected by the healthcare practitioner across the maps.~~

47. (Currently amended) A method of assisting a healthcare practitioner in diagnosing and treating patients using a graphical user interface (GUI) for interacting with the healthcare practitioner during progression through a stored clinical best practice workflow comprised of a plurality of interlinked steps, the method comprising:

generating a page of the GUI, the page including a map for assisting the healthcare practitioner to navigate the stored clinical best practice workflow, the map comprising a plurality of patient care pathways, each patient care pathway conforming with best practice guidelines and

comprising a series of interlinked nodes, wherein each node in the series has a unique relationship with a respective step in the stored best practice workflow; ~~the plurality interlinked nodes graphically represent a plurality of possible patient care pathways across the map, and each patient care pathway comprises two or more of the plurality of interlinked nodes;~~

displaying, within a portion of the page, a predetermined data entry request relating to a particular selected node;

entering clinical data in response to the data entry request;

storing the clinical data entered in response to the data entry request in a data record;

~~graphically indicating a suggested node to traverse using the response of the healthcare practitioner stored in the data record to suggest a next step within next within~~ the stored best practice workflow based on the clinical data stored in the data record, the healthcare practitioner choosing the node to traverse next independently of the suggested node;

permitting the healthcare practitioner to traverse a route across the map that misses out one or more nodes from the series of nodes representing the currently traversed patient care pathway; and

graphically representing in the page the route traversed a patient care pathway across the map selected by the healthcare practitioner across the map.

48. (Withdrawn) A graphical user interface (GUI) for interacting with a user during a workflow process, the GUI comprising:

searching means for searching an externally accessible knowledge base, the searching means comprising:

conversion means for converting a selected information topic into a predetermined classification code representing that topic; and

transmission means for transmitting that classification code within an information request over a communications network to the knowledge base to access relevant information contained therein.

49. (Withdrawn) A GUI according to Claim 48, wherein the conversion means further comprises a local database of predetermined classification codes and an associated list of specific

information topics which are each mapped to a specific classification code.

50. (Withdrawn) A GUI according to Claim 48, wherein the classification code comprises a standard classification code describing a complete range of possible data inputs relevant to the subject of the workflow process.

51. (Withdrawn) A GUI according to Claim 48, wherein the subject of the workflow process is clinical medical information and the classification code represents one of the group comprising a diagnosis, a symptom, an action, a treatment and an operative procedure.

52. (Withdrawn) A GUI according to Claim 51, wherein the classification code comprises a SNOMED code.

53. (Withdrawn) A GUI according to Claim 48, wherein the searching means is arranged to receive a response to the information request and display the results of the search to the user.

54. (Withdrawn) A GUI according to Claim 48, wherein the searching means is arranged to receive a response to the information request and use the response to determine a relevant part of the workflow process to display to the user.

55. (Withdrawn) A GUI according to Claim 48, wherein the searching means is arranged to display a plurality of information topics to the user and to enable selection of at least some of these information topics, each information topic being related to a current user accessed part of the workflow process.

56. (Withdrawn) A GUI according to Claim 55, wherein the searching means is arranged to enable the user to enter additional information topics not displayed by the searching means.

57. (Withdrawn) A method of interacting with a user during a workflow process using a graphical user interface (GUI), the method comprising:

receiving a user instruction from the GUI to search an externally accessible knowledge base;

initiating a search of the knowledge base by:

converting a selected information topic into a predetermined classification code representing that topic; and

transmitting that classification code within an information request over a communications network to the knowledge base to access relevant information contained therein.

58. (Currently amended) A plurality of graphical user interfaces (GUIs), each GUI being arranged for to assisting a healthcare practitioner in diagnosing and treating patients by interacting with the healthcare practitioner during progression through a respective centrally-stored version of a stored clinical best practice workflow comprised of a plurality of interlinked steps, the and each GUI comprising:

a page including a map for assisting the healthcare practitioner to navigate the respective centrally-stored version of the stored clinical best practice workflow, the map comprising a plurality of patient care pathways, each comprising a plurality series of interlinked nodes, wherein each node in the series has a unique relationship with a respective step in the respective centrally-stored version of the stored clinical best practice workflow currently-being-traversed by the healthcare practitioner, the plurality of interlinked nodes graphically represent a plurality of possible patient care pathways across the map which may be selected by the healthcare practitioner, and each patient care pathway comprises two or more of the plurality of interlinked nodes;

editing means for enabling the healthcare practitioner to edit at least some of the plurality of interlinked nodes on the page; and

updating means for arranged to updating update the plurality of interlinked steps of the respective centrally-stored version of the stored clinical best practice workflow with any corresponding changes made to the plurality of interlinked respective nodes on the page by the healthcare practitioner.

59. (Previously presented) A GUI according to Claim 58, wherein the editing means is arranged to enable the healthcare practitioner to add a new node and to specify the contents of the new node.

60. (Previously presented) A GUI according to Claim 58, wherein the editing means is arranged to enable the healthcare practitioner to specify functionality associated with a node.

61. (Previously presented) A GUI according to any of Claims 58 to 60, wherein the editing means is arranged to enable the healthcare practitioner to add or edit a classification code associated with the contents of a node.

62. (Currently amended) A GUI according to Claim 58, wherein the editing means is arranged to enable the healthcare practitioner to control the position of the new node within the page and interconnection of the new node to the existing ~~plurality of interconnected~~ nodes.

63. (Previously presented) A GUI according to Claim 58, wherein the editing means is arranged to facilitate editing of clinical information associated with a node.

64. (Previously presented) A GUI according to Claim 58, wherein the editing means is arranged to facilitate editing of administration information associated with a node.

65. (Withdrawn) A system for supporting distributed interaction with a user during a workflow process, the system comprising:

- a centrally stored graphical representation of the workflow process,

- a plurality of users located remotely from the centrally stored representation and related to each other in a user hierarchy, each user having access to a version of the representation;

- referral means provided within each version of the representation to generate a referral message, the referral means being arranged to send the message to a reviewer in a next higher level in the user hierarchy.

66. (Withdrawn) A system according to Claim 65, wherein the referral means is arranged to receive a referral message from a user in a next lower level in the user hierarchy.

67. (Withdrawn) A system according to Claim 65, wherein the referral means comprises forwarding means arranged to enable a reviewer to forward the message onto another reviewer at a next higher level within the hierarchy if required.

68. (Withdrawn) A system according to Claim 65, wherein the referral means comprises response means enabling a reviewer to generate a message and send it to the referring user.

69. (Withdrawn) A system according to Claim 68, wherein the response means is arranged to specify a response to the feedback message which can be used to update a monitoring function.

70. (Withdrawn) A system according to Claim 69, wherein the monitoring function is accessible to all uses involved with the feedback message.

71. (Withdrawn) A system according to Claim 69, wherein the response means is arranged to specify a resolution to the feedback message, which can be used to update the monitoring function.

72. (Withdrawn) A system according to Claim 65, wherein the representation comprises a plurality of interlinked nodes which graphically represent the structure of a plurality of interlinked steps of the stored workflow process;

73. (Withdrawn) A system according to Claim 72, wherein the referral means is provided at a node of the representation and using information associated with the node to populate at least some of the referral message on user-selection.

74. (Withdrawn) A system according to Claim 65, wherein the referral means comprises a graphical icon and user selection comprises interaction between a user navigational tool and the

icon.

75. (Withdrawn) A system according to Claim 65, wherein the referral means is arranged to use information obtained from an electronic patient record to populate automatically at least some of the referral message.

76. (Withdrawn) A system for distributing a new version of a graphical user interface (GUI) to a user, the system comprising:

- a central store retaining a GUI representation of a workflow process;

- a plurality of users located remotely from the central store and related to each other in a user hierarchy below the central store, each user having access to a version of a previous representation;

- comparing means for comparing the new version of the representation with a user's previous version of the representation to determine any differences;

- forwarding means for forwarding those differences to the user associated with that version of the representation for consideration; and

- reviewing means provided within each previous version of the representation, the reviewing means being arranged to accept or reject the differences and to convey an acceptance or rejection to a higher level within the hierarchy.

77. (Withdrawn) A system according to Claim 76, wherein the reviewing means is arranged to accept some of the differences and to communicate the acceptance in part to a higher level within the hierarchy.

78. (Withdrawn) A system according to Claim 76, wherein the reviewing means is arranged to enable the user to carry out the acceptance in part of the differences manually.

79. (Withdrawn) A system according to Claim 76, wherein the GUI representation comprises a plurality of interlinked nodes which graphically represent the structure of a plurality of interlinked steps of the stored workflow process.

80. (Withdrawn) A system according to Claim 76, wherein each user has an associated permission which determines the degree of changes that can be accepted at their particular level in the hierarchy.

81. (Withdrawn) A system according to Claim 76, further comprising means for notifying each user of their position within the hierarchy and the permissions associated therewith.

82. (Currently amended) A method of constructing a graphical user interface for assisting a healthcare professional in diagnosing and treating patients, the method comprising:

collating content regarding a clinical best practice workflow;

recording that content in a database as a series of steps of a hierarchically structured clinical best practice workflow; and

automatically generating a graphical representation of the hierarchical clinical best practice workflow from the content recorded in the database, which can be used to guide a healthcare practitioner progressively through the clinical best practice workflow;

the graphical representation comprising a page including a map for assisting the healthcare practitioner to navigate the stored clinical best practice workflow, the map comprising a plurality of patient care pathways, each patient care pathway conforming with best practice guidelines and comprising a plurality series of interlinked nodes, wherein each node in the series has a unique relationship with a respective step in the hierarchical clinical best practice workflow structure, ~~the plurality of interlinked nodes graphically represent a plurality of possible patient care pathways across the map selectable by the healthcare practitioner, and each patient care pathway comprises two or more of the plurality of interlinked nodes.~~

83. (Original) A method according to Claim 82, wherein the generating step comprises generating a graphical representation comprising the plurality of interlinked nodes on a single page.



84. (Previously presented) A method according to Claim 82, wherein the recording step comprises creating a clinical best practice workflow which commences with a fact in relation to one of a plurality of causes of the fact and the clinical best practice workflow steps provide a methodology to determine which of the plurality of causes is responsible for generating this fact.

85. (Previously presented) A method according to Claim 84, wherein the fact comprises a symptom and the cause of the fact comprises a medical condition.

86. (Previously presented) A GUI according to Claim 58, wherein the editing means is arranged such that its use by the healthcare practitioner is restricted by permissions.

87. (Previously presented) A GUI according to Claim 12, wherein said clinical information is revealed on the page by selection of the node itself within the GUI by the healthcare practitioner

88. (Previously presented) A GUI according to Claim 13, wherein selective interaction with the node by the healthcare practitioner comprises interaction between an end-user navigational tool and the icon.

89. (Previously presented) A GUI according to Claim 1, wherein the graphical means is arranged to graphically indicate previously executed steps in the best practice workflow to the healthcare practitioner.

90. (Previously presented) A method according to Claim 47, wherein previously executed steps in the best practice workflow are graphically indicated to the healthcare practitioner.

91. (Previously presented) A method according to Claim 47, further comprising interacting with a node displaying a graphical indication that concealed clinical information relating to the step in the stored best practice workflow associated with that node is available, thereby revealing the concealed clinical information in use.

92. (Currently amended) A graphical user interface (GUI) for assisting a healthcare practitioner in diagnosing and treating patients by interacting with the healthcare practitioner during progression through a stored clinical best practice workflow comprised of a plurality of interlinked steps, the GUI comprising[[:]] :

a page including a map for assisting the healthcare practitioner to navigate the stored clinical best practice workflow, the map comprising a plurality of patient care pathways, each patient care pathway conforming with best practice guidelines and comprising a series of interlinked nodes, wherein each node in the series has a unique relationship with a respective step in the stored best practice workflow, ~~the plurality of interlinked nodes graphically represent a plurality of possible patient care pathways across the map, and each patient care pathway comprises two or more of the plurality of interlinked nodes;~~

data entry means for entering clinical data relating to a particular selected node, the data entry means comprising display means for displaying, within a portion of the page, a predetermined data entry request and a response made by the healthcare practitioner to the request;

data recording means for storing the response, made by the healthcare practitioner to the request, in a data record;

navigation means arranged to enable the healthcare practitioner to choose the node to traverse next, and to permit the healthcare practitioner to traverse a route across the map that misses out one or more nodes from the series of nodes representing a currently traversed patient care pathway; ~~pathway means arranged to enable the healthcare practitioner to select a next step within the stored best practice workflow, thereby assisting the healthcare practitioner to determine a particular patient care pathway across the map; and~~

graphical means for graphically representing in the page ~~a patient care pathway across the map selected~~ the route traversed by the healthcare practitioner across the map.